• Open monitoring meditation
  • Mindfulness: “particular way of paying attention to the present characterised by receptive and non-judgemental attitude” (Kabat-Zinn, 1994)

• Sustained attention
  • “the ability to direct and focus cognitive activity on specific stimuli” (DeGangi & Porges, 1990)
  • e.g. reading the newspaper

• Open monitoring meditation enhance sustained attention - study of Valentine & Sweet (1999)
• Mindfulness meditation in general
AIM OF STUDY:

Open Monitoring
Meditation —
Sitting meditation

Body forms

Sustained Attention
Body Posture

• In behaviour, stimulus-response association
  o Conditioned Stimulus – maintain body posture, e.g. the sitting form
  o Conditioned Response – mindfulness meditating

• Body form may play important role
  – Tasks with same body form

• Law of frequency in behaviour – strong habit
  – Likely evoke state of mindfulness in tasks, without intending to meditate
Hypothesis of Study:

Sustained Attention

(Frequency posture)

Frequent mindfulness meditator

Sustained Attention Task
Method: Participants
Method: Design

4 consecutive & separate days of meditation followed by visual continuous performance test

Meditation exercise: Focus on breathing
Method: Design

<table>
<thead>
<tr>
<th>Continuous Performance Test</th>
<th>Exercise A</th>
<th>Exercise B</th>
<th>Exercise C</th>
<th>No exercise</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Experimental group 1</td>
<td>Experimental group 2</td>
<td>Experimental group 3</td>
<td>Control group</td>
</tr>
</tbody>
</table>
Method: Design

What are we measuring?

Visual Continuous Performance Test: Participants’ response rate & error rate.

Dependent variable: Participants’ performance on visual sustained attention
Independent variables: Participants’ different meditative body forms.
Method: Materials

Quiet room

Mats

Chairs

Computers for Continuous Performance Test
Method: Procedure

All participants in the meditative groups were given consent forms to ensure that:

- Their religious beliefs will not clash with the principles of this experiment’s meditation exercises,
- They do not practice meditation as a lifestyle,
- They understand what the experiment is about.
Method: Procedure

Sitting Meditation (Bishop, Lau & Shapiro, 2004):
• Sitting cross-legged and upright on mat
• Instructed to:
  – Maintain focus on breathing
  – If attention wanders to thoughts, feelings, or sensations, they are to take notice and let go
  – Return attention to the breath
• Other groups, instead of sitting cross-legged, they either were standing or sitting on a chair meditating
• Followed by their first day of meditation exercise and 3 more consecutive days.
  • (Depending on which meditative group)
Method: Procedure

Find a comfortable corner in the room facing the wall and do standing meditation.

Sit on a chair they choose in the room and meditate sitting down on that chair.

Find a comfortable spot on a laid out gym mat and do meditation crossed-legged and seated.

Control group participants will not be asked to participate in the four separate days of meditation exercise.
Method: Procedure

Finally, the test

Three experimental groups

Control group

Sustained Attention task
Ethical Issue

• The Issue: Religious connotations associated with mindfulness meditation

• The Solution: Consent to exercise and/or assigning a meditative body form that does not conflict with belief.
Predicted Results

Effect of meditative body form on sustained attention task

<table>
<thead>
<tr>
<th>Group</th>
<th>Meditative Body Form</th>
<th>Average Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Standing</td>
<td>45</td>
</tr>
<tr>
<td>2</td>
<td>Sitting cross-legged</td>
<td>57</td>
</tr>
<tr>
<td>3</td>
<td>Sitting on a chair</td>
<td>68</td>
</tr>
<tr>
<td>4</td>
<td>Control</td>
<td>50</td>
</tr>
</tbody>
</table>
Reference


• Group mark: 45/50. 90% point
• Average is 70% point
• With Natalie Sookie (UNSW)